

October 12, 2007

Environmental Management Support, Inc.
Attn: Mr. Don West
8601 Georgia Avenue, Suite 500
Silver Springs, MD 20910

United States Environmental Protection Agency
Attn: Michael Norman
Atlanta Federal Center, 61 Forsyth Street
Atlanta, GA 30303

**Re: Brownfields Grant Application – Fiscal Year 2008
Community-Wide Assessment - Hazardous Substances
*Letcher County, KY Mine-Scarred Lands Brownfields including Acid Mine Drainage***

Dear Mr. West,

The Letcher County Conservation District is pleased to submit the Fiscal Year 2008 Brownfield Grant Application to complete a Community-Wide Assessment of Hazardous Substances within Letcher County, KY. **The District is also submitting an identical application under separate cover for community-wide assessment of petroleum.**

Letcher County is located in the coalfields of Southeastern Kentucky, a region that has fueled the nation with coal to keep our national economy running. For nearly a hundred years, the coal industry has been the base of Letcher County's economy. Unfortunately, this has left Letcher County with a legacy of environmental problems that remain in the community after the coal is burnt and the energy put to good use. These brownfield sites are an impediment to healthy lives and economic development.

Previous water sampling and inventory activities by local volunteers have identified Acid Mine Drainage, coal refuse piles, abandoned surface mines, tipples, and other mining infrastructure that remain as dangers to human and environmental health. This Mine-Scarred Lands Brownfields Assessment will use a community-based approach to go back to these sites and prioritize them according to threat to human health and redevelopment potential. Phase I/II Assessments will be carried out at sites given the highest priority and planning will take place with relevant partners to build local capacity to address the clean up needs.

1. APPLICANT IDENTIFICATION:
Letcher County Conservation District
30 B Childers Rd
Whitesburg, KY 41858
Phone: (606)633-4448

2.FUNDING REQUESTED:
A: Assessment
B: \$200,000
C: Hazardous Substances
D: Community-Wide

Fax: (606)633-5455

3. LOCATION: Letcher County, Kentucky

Letcher County Judge Executive

Jim Ward

156 Main St., Suite 107

Whitesburg, KY 40602

PHONE: (606) 633-2129

FAX: (606) 633-7105

4. CONTACTS

Chief Executive

Ronald Brunty

Letcher County Conservation District

30 B Childers Rd

Whitesburg, KY 41858

Phone: (606)633-4448

Fax: (606)633-5455

Grantwriter

Evan Smith

Head of Three Rivers Project

PO Box 1422

Whitesburg, KY 41858

Phone: (877)218-7482

letcherwater@gmail.com

5. DATE SUBMITTED: 10/12/2007

6. PROJECT PERIOD: October 1, 2008 – September 30, 2011

7. POPULATION: 25,277 (2000 U.S Census)

9. COOPERATIVE PARTNERS:

Kentucky Office of Brownfields, Herb Petijean, 502-564-0323

Kentucky Division of Abandoned Mine Lands, Steve Hohmann, 502-564-2141

Eastern Kentucky Environmental Research Institute, Alice Jones, 859-622-6914

Letcher County Health Department, Keven Nichols, 606-633-2068

Letcher County Water & Sewer District, Greg Pridemore, 606-633-8550

Letcher County Tourism Commission, Josephine Richardson, 606-632-1200

Headwaters, Evan Smith, 606-205-8753

Kentucky Watershed Watch, John Webb, 502-564-3410 x102

HOMES, Inc, Donald Proffit, 606-632-1717 x302

Thank you for your consideration of this application. Should you have any questions or require further information, please contact Mr. Evan Smith at your convenience.

Sincerely,

Ronald Brunty

Chairman

b. PROJECT DESCRIPTION

A: APPLICANT ELIGIBILITY:

The Letcher County Conservation District is a Government Entity created by state legislature (KRS Chapter 262).

B: LETTER FROM STATE ENVIRONMENTAL AUTHORITY

See ATTACHMENT A, letter from Herb Petijean, Brownfields Coordinator with KY Division of Compliance representing KY Department for Environmental Protection.

C: SITE ELIGIBILITY

Not applicable. The District is requesting funds under the community wide designation and has not selected specific sites. However, the District will use funding to address, characterize, and prioritize Mine-Scarred Lands meeting the federal definition of brownfields and are determined eligible by US EPA and Kentucky Office of Brownfields.

Ranking Criteria

A: ASSESSMENT GRANT PROPOSAL BUDGET

Budget Categories	1. Quality Assurance Program Plans/GIS Inventory of Sites	2. Environmental Assessments (Phase I & Phase II)	3. Community Education, Outreach, Programmatic Expenses, Travel	4. Remedial Action Project Planning and Design	TOTAL
<i>Personnel</i>	2,500		17,500		20,000
<i>Fringe Benefits</i>					
<i>Travel</i>	500		1,500*		2,000*
<i>Equipment</i>					
<i>Supplies</i>	6,000		2,000		8,000
<i>Contractual</i>	22,000	130,000	3,000	15,000	170,000
<i>Other</i>					
TOTAL	31,000	130,000	24,000	15,000	200,000

*includes cost for attendance of the National Brownfields conference

Task 1 – *Quality Assurance Program Plans/GIS Inventory of Sites.*

Task 1 will involve the identification, inventory, profiling, mapping, and prioritizing of sites. Major inroads to this task have already been made, but a formal process - including a Quality Assurance Project Plan - is needed to create a GIS Inventory that can be used for prioritization. The Eastern Kentucky Environmental Research Institute's *Head of Three Rivers Project* and community volunteers have identified the major Acid Mine Drainage (AMD) sites in Letcher County and collected basic physiochemical parameters

(e.g. pH, conductivity, iron) for each site. This inventory will expand on this data by measuring flow, discharge, aluminum, and manganese to further understand the physiochemical situation at each AMD site. Non-AMD mine-scarred lands brownfield sites such as abandoned coal tipples, refuse piles, and abandoned surface mines will be mapped as well. A title search and landowner inquiry will be done at each site. The inventory will produce a document that gives a summary of each site with its general condition and prospects for remediation.

“Contractual” costs include the production of a short video about the brownfields program to be used as a part of community education and outreach.

“Supplies” costs include public notice fees, copy costs, and other expenses related to the procurement process involved with hiring an environmental consultant to assist the District implement this grant.

(Inventory of 25-40 sites @ \$750 - \$1,250 per site)

Task 2 – Site Assessments.

Based on the findings from the inventory, the sites will be prioritized according to actual or potential human health threats, potential for redevelopment (e.g. housing, community park, education center, commercial development), community priority, advice from state/federal agencies, and physical space within which to work. This process of prioritization will include community meetings for people around the county and residents of sub-watersheds impacted by AMD.

A WVDEP Voluntary Remediation Program (VRP) Phase I Environmental Site Assessment (ESA) will be done at approximately 4-6 sites given the highest priority. Based on the findings of the Phase I assessment and meetings with advisors including US EPA and the Kentucky Brownfield Office, one to three Phase II ESAs with groundwater studies will be carried out at the sites most conducive to cleanup and redevelopment. The consultant will be responsible for providing US EPA with the necessary Quality Assurance/Quality Control Project Plans (QAPP), Sampling and Analysis Plans (SAP), and Health and Safety Plans (HASP).

(4-6 Phase I assessments @ \$5,000 - \$10,000 per site,

1-3 Phase II Assessments @ \$25,000 - \$80,000 per site)

Task 3 – Community Education Outreach.

It is imperative to the success of this project that this effort is viewed by the residents of Letcher County as a local effort rather than the work of specialists that have descended upon a problem. Community members have been involved with the groundwork and will continue to stay involved as further work is carried out. An intern will be hired to stay in close contact with community members and organize education and outreach events.

Community forums will be a key tool to make decisions on the prioritization of sites that receive a Phase I/Phase II assessment. Information about the sites will be made available at a symposium organized specifically to talk about Acid Mine Drainage and mine scarred lands brownfield problems, at a booth set up at events such as the Mountain Heritage Festival (Letcher County’s community festival), and on the internet at www.letcherwater.com (an already functioning site about water quality in Letcher County, KY)

The “Supplies” and “Contractual” line will be used for expenses related to these outreach activities and other programmatic necessities to successfully complete the project and produce a final closure report.

Task 4 – *Site Engineering and Design.*

Remedial Action Project Plans (RAPP) and Designs will be written for 1-3 properties that receive a Phase II ESA. A consultant will be hired that will generate user-friendly reports in accordance with VRP guidelines that can be used in future efforts to generate funding and community support for cleanup and redevelopment.

B. COMMUNITY NEED

1. Letcher County is located in the “Heart of The Hills” in Southeastern Kentucky. Three of the Eastern United States’ major rivers - The Kentucky, The Cumberland, and The Big Sandy – have their headwaters in Letcher County. Even after Daniel Boone and other settlers made their way into this area in the 18th Century, Letcher County remained largely isolated until the 20th Century when railroads reached into the hollows to extract the coal buried in the hills. Large corporations like US Steel and Consolidated Coal quickly built mining camps along the rail line and the first half of the 20th Century brought ten of thousands of immigrants to work the mines along with local farming families. This era is reflected in the film about country music singer Loretta Lynn, “Coal Miner’s Daughter”, which was filmed in Letcher County in the late 70s.



The mechanization of the mining industry in the second half of the 20th Century brought economic decline and a wave of out migration. More coal is mined today in Letcher County than during the county’s population peak in the 1940s, yet the workforce gets smaller each year and widespread poverty is rampant. Luckily though, the area has proudly held onto its rich cultural heritage of old time music and folk arts. The nationally recognized Letcher county media arts center Appalshop has created films, theater, records, and radio that celebrate local culture since 1969. This brownfields project is a part of a growing effort to build a new economy and reverse the local economic and social downturn by attracting ecotourism and encouraging local arts.

Letcher County Demographic Information (from 2000 U.S. Census)

Total Population: 25,277

<i>Race and Ethnicity</i>	<i>Population</i>	<i>Percent of Total</i>
White	24,952	98.7%
Black of African American	129	.5%
American Indian or Alaska Native	25	.1%
Asian	70	.3%
Two or More Races	89	.4%
Hispanic or Latino	110	.4%

Low Immigrant and ESL Populations

*99.6% of Letcher County residents are native citizens of United States.

*98.3% of Letcher County residents speak “English Only” at home and
99% of Letcher County residents speak English “very well” or only

High Illiteracy Rate

Although the Census does not collect data on illiteracy, the best estimate available puts 21.9% - 32.6% of Letcher County in the “functionally illiterate” category of National Adult Literacy Survey Level 1.

(data generated through database created by Stephen Reder of Portland State University. Database combined 1990 Census data with information from the 1993 National Adult Literacy Survey, the range above is in the 95% confidence interval)

Socio-economic Indicators:

***66% of students at Letcher County public schools qualify for free/reduced price school lunches**

Some schools near brownfields have as high as 88% qualification

*Population below poverty line: 27.1% (more than double the national average)

*Per Capita Income: \$11,984 (55% of national average)

*Current Unemployment Rate: 8.2% nearly double the national average (data from Federal Deposit Insurance Corporation (FDIC) Second Quarter 2006)

*Designated on Appalachian Regional Commission (ARC) Distressed Counties list since the designation began

*While the coal industry is the largest employer by industry, the largest single employer in the county is the Board of Education. Other major employers are hospitals, clinics, and government sponsored providers of necessary services.

2. Targeted Community

The county’s communities developed in the bottoms alongside the headwaters streams due to steep topography that leaves limited flat land. **90% of Letcher County citizens live within 100 feet of a creek or stream and all of the county’s cities have been developed along waterways.** The quality of the local environment has direct effects on nearly every citizen in Letcher County and over a million Kentuckians downstream. Some of Kentucky’s most pristine, Wild & Scenic streams are located in Letcher County. Unfortunately, some of state’s most degraded streams are also here and often closer to people’s daily lives than the pristine streams.

A full generation has grown up in Letcher County seeing the effects of a hundred years of coal extraction. The region has been thankful for the jobs, but the land and water have suffered. Orange and white streams laden with heavy metals contaminate public waterways, blight the community, and wreak havoc on the region’s biodiversity. Old mining refuse piles and surface mines scar the landscape and local viewsheds. Abandoned coal tipples¹ and other industrial infrastructure such as machine shops and

¹ “Tipples” are structures in which raw coal is processed and loaded for transport. Maintenance of a variety of machinery and equipment often took place at or near these

switchyards remain as dark playgrounds blocking potential development. As a future beyond coal becomes a reality, the past environmental devastation limits the potential for ecotourism, sport fishing, and retirement communities that other Appalachian counties have turned their economy towards. This dilemma creates a general malaise and feeling of depression that leaves the population prone to drug abuse and dependence on welfare. There is a need for environmental justice to correct the problems that the nation's industry has left in Letcher County's backyard. These would likely be state or federal superfund sites if were not for the limited resources to address numerous sites.

By assessing the situation and planning for the redevelopment of brownfields, this project hopes to inject much needed optimism and community spirit. Water and landscape are tangible common goods that once cleaned up, benefit everyone along the stream, downstream, and in the area. Reclaiming mine-scarred lands is a real metaphor for reclaiming the environment so that the next generation can have a future with clean water and landscapes.

Other communities in Pennsylvania and West Virginia have cleaned up their historic coal-related problems and created development opportunities that lead to new economies and an influx of dollars and pride. Mining engineers in Kentucky have experience cleaning up problems very similar to Letcher County's. These brownfields certainly have potential for clean up and redevelopment and the time is right to bring available resources together and assess their risks to humans and the environment.

Fixing the region's historic problems allows residents and tourists to focus on the pristine streams and the environmental and recreational uses they support. Letcher County is home to ten species on Kentucky's threatened and endangered species list. Assessing the impact of the county's brownfields will help the county create an economy that preserves the county's best features while cleaning up its worst.

3. Brownfield Characterization

In Letcher County, most mine-scarred lands brownfields are located near old mining communities along the rail lines which ran beside major streams. These streams are still major arteries of the community and brownfields properties are clearly visible in people's daily lives. Whether it is a bare, gray refuse pile, a rusting tippie, or an orange stream every Letcher County resident can point to the remains of past industry. These lands are considered contaminated by the community and have become largely abandoned being used only for illegal dumping and drug activity. Each of these activities brings further risks of contamination whether it be the dumping of transformers contaminated with PCBs or controlled substance contamination from methamphetamines.

Most of Letcher County's Acid Mine Drainage results from pre-law, underground mine works that have filled up with groundwater allowing the pyrite in coal to oxidize and produce sulfuric acid and iron. The pH of this acidic water can be below 3, as acidic as vinegar, and result in the leeching of other dangerous metals into the water. This toxic water is a visual blight, destroys stream ecosystems, and results in known carcinogens entering the waterways. In some cases, AMD results from refuse piles of coal waste

sites bringing a variety of potential contaminants including petroleum, PCBs, battery acid, and acid mine drainage.

rather than underground works, but the end result is the same. There are 26 known AMD sites in Letcher County and possibly more. The sites are typically found in areas with long histories of coal extraction with multiple sites often being clustered together. Old mining communities and their populations are still located near these sites and are forced to buy bottled water by the truckload due to the groundwater impacts.

SEE ATTACHMENT B: PHOTOS OF TYPICAL BROWNFIELDS (showing orange streams from AMD, un-reclaimed surface mines, and abandoned fuel tanks)

These sites qualify as Mine-Scarred Lands (MSL) Brownfields. To date only one MSL Brownfield Assessment has been granted by EPA Region 4. This project would be a suitable way to expand into Kentucky and Central Appalachia through the Mine-Scarred Lands Initiative. This grant also serves an area that has been disproportionately affected by environmental contaminants and fulfills the EPA's Environmental Justice goal.

C: SITE SELECTION PROCESS

1. Site Identification

Sites will be selected based on input from community meetings, knowledge of local decision makers, and information from previous inventories by the Office of Surface Mining (OSM), Kentucky Division of Abandoned Mine Lands (AML) and Eastern Kentucky Environmental Research Institute (EK-ERI). This brownfields grant will allow the community to use these previous inventories in conjunction with community vision for development to decide which sites have the highest redevelopment potential and conduct Phase I/Phase II ESAs at these sites.

2. Previous Inventory Activities

The 26 Acid Mine Drainage sites that are part of the current list were selected based on community knowledge backed up by physiochemical measurements (pH & iron) and visual confirmation of metal particulate. This AMD inventory was conducted in 2006 & 2007 by community volunteers and the EK-ERI *Head of Three Rivers Project* OSM/VISTA. Sites were discovered by sampling nearly every first order stream in Letcher County for parameters that would indicate AMD. In 2000, an inventory was compiled by an OSM intern working with the Letcher County Water & Sewer District. This inventory was limited for logistical reasons to sites within a 10-mile radius of the county seat, Whitesburg. The current list of 26 AMD sites is the best inventory to date, but further data on these sites is necessary for prioritization.

The Abandoned Mine Land Inventory System (AMLIS) maintained by the Office of Surface Mining Reclamation and Enforcement (OSM) and Kentucky AML currently lists 128 AML problem sites in Letcher County. The AMLIS Inventory is dynamic and only lists the problems of highest priority. As federal funding for AML problems has increased in the past year, this inventory has expanded. Not all of these inventories' sites would be eligible or suitable for brownfields assessment, but these inventories will prove helpful in site identification

3. Access Issues

Typically local property owners in Letcher County are very accommodating towards environmental cleanup. All Acid Mine Drainage sites have been previously accessed by EK-ERI's OSM/VISTA with verbal permission from local property owners. No problems are anticipated, but if property owners are not interested in having further assessment done then these sites will be skipped for this round of assessment with the hope that the end product of the assessment will help convince land owners that AMD remediation can be an asset.

D: SUSTAINABLE REUSE OF BROWNFIELDS

1. Pollution

This assessment will help create plans and community support to prevent a variety of pollutants from entering the human and natural environment. Endangered species such as the Black-Side Dace and Cumberland Johnny Darter are found in Letcher County streams and put at risk due to Acid Mine Drainage. Most Letcher County homes are forced to haul water to their homes because their wells, are now contaminated with AMD, PCBs, petroleum, or other pollutants.

New housing and commercial redevelopment will bring adequate and sustainable infrastructure that are not plagued by the same lack of planning that the original mining communities were plagued by. Many of these mining camps were built without sewer systems and "straight pipes" are still used that channel raw sewage directly to streams. The Letcher County Water & Sewer District will help ensure that proper infrastructure is in place so that public water and sewer ensures healthy communities. Storm water management will be integrated in construction and paving and nonpoint source pollution will be minimized. All new development will follow the Leadership in Energy and Environmental Design (LEED) standard to ensure that low pollution will be a permanent fixture of these developments. The District will work with Letcher County Parks and Recreation to incorporate community parks and ensure that these communities are walkable and encourage efficient transportation. The Letcher County Conservation District will do everything possible to encourage sustainable development to lower the local, regional, and national pollution level.

2. Economic Benefits

"In a recent report, the Mid-Atlantic Highlands Action Plan stated that, according to the Association of General Contractors, for every \$1 million dollars spent to remediate Acid Mine Drainage-impaired streams, 59 jobs are created.[less than \$17,000 per job] Restoration projects enhance tourism and enhance recreational expenditures and expertise. There is also the belief that experience in restoration activities can be exported to communities here and abroad who have begun to recognize their own needs in restoration work."

-Canaan Valley Institute. Mid-Highlands Action Program Report (July 2002)

Mine-scarred lands brownfields clean up brings many economic benefits along with the environmental improvements. Local residents see the scarred hills, old tipples,

and orange and white streams as a leftover of the early 20th Century coal boom. By planning treatment systems, this project is encouraging a future of ecotourism and sport fishing. It is estimated that each trout brings \$42 into the local economy. If Letcher County would like to establish a profitable trout fishery by 2030, cleaning up Acid Mine Drainage is a necessity. In addition the treatment systems could be planned in a user-friendly manner that would encourage educational tourism for people around the region to learn about AMD abatement and how this has worked in Letcher County. This will literally turn what was once a liability into a community asset and a reason to visit the county.

Clean up of land-based mine-scarred lands brownfields will create suitable space for a variety of redevelopment options. The central location of old tipples offers excellent location for residential and commercial centers. This will expand the tax base not only by bringing more money into the economy, but also by increasing property values in these areas. Rather than having an orange stream, grey hill, or rusting steel structure, clean up will allow native landscaping to grow and open up areas to profitable real estate and commercial development.

3. Vibrant Community

This project will serve as an example of the vibrancy of the local community by showing how citizens can come together for a common good and take action to see that their streams are improved. These brownfield sites are typically close to towns and adjacent to old rail lines that could be turned into walking and biking paths. This redevelopment project will tie these decaying mining communities in with current commercial areas to expand community life.

Treatment systems and clean up options can be designed to pay tribute to the cultural history of the region. By remediating the negative environmental effects of past coal mining while emphasizing the proud and resilient culture that supplied the fuel for the nation's industrial economy, it is possible to accept and emphasize the good things about coal mining while fixing the bad. This process of transforming the past into a desirable future will invigorate the community and become a source of local pride. The AMD&Art Project in Vintondale, PA offers many lessons about how to invoke local history while cleaning up coal related environmental problems.

E. GREENSPACE/OPEN SPACE

By reusing blighted spaces close to existing infrastructure, the District is helping to preserve existing green space in the county and prevent unplanned development that can lead to environmental problems. Zoning is an unpopular issue in rural Kentucky, but revitalizing areas left impaired by past industrial development will help direct future development into these appropriate areas and preserve natural areas. The prioritization process will allow the community and local decision makers to have an influence in which areas are redeveloped.

Throughout the process of brownfield clean up, local community members will be asked what they would like the treatment system to look like so that they will be proud to show it to friends and family. The treatment systems should not be toxic cesspools that are hidden from the public eye. Each treatment system will include greenspace based on native plants to beautify the hollow and promote revegetation of wetlands and riparian zones. In addition each stream cleaned up affects miles of impacted downstream waterways, in effect, enhancing the greenspace of the entire watershed. Aquatic life will begin to return and in time outdoor aquatic recreation will once again be possible, bringing people back in touch with their natural environment.

The long term management and care of the greenspace aspects of the treatment systems should be relatively low maintenance. Community volunteers will be able to keep out litter and invasive species without any harm to their health. Larger needs could be handled by the Letcher County Parks & Recreation Department. Due to the fact that these treatment systems will be collecting toxic heavy metals in a special settling pond it will be necessary at some point in the future (25-50 years) to excavate the treatment systems and properly dispose of the accumulated metals-laden sediment. A pond is used so this excavation will not massively impact the vegetation. Funds will be set-aside in a trust fund for periodic excavation.

F: PRE-AWARD COMMUNITY NOTIFICATION

1. Community notification will be the District with the help of Eastern Kentucky Environmental Research Institute's *Head of Three Rivers* OSM/VISTA. The FY 2008 OSM/VISTA position will be a Letcher County native with an office in downtown Whitesburg, Letcher County's seat. A dedicated effort estimated at over 160 hours of staff time will be made to get out the word by all possible means including but not limited to, newspaper articles, radio PSAs, flyers at popular community destinations (i.e. library, Wal-Mart), visits to community centers, a webpage, a video, and a public forum. Handbills will be given to property owners that live near AMD sites. Government officials and agencies will be notified by letter and presentations at city council and county government meetings. Copies of the proposal will be made available in hard copies and on the Internet.

The feature of the public notification effort will be a public forum held in a central location in Letcher County. A carousel/facilitator model will be used in which six stations are set up around the room with tri-fold poster boards. The six stations will cover each of the following topics: (1)What is a brownfield?, (2)Acid Mine Drainage, (3) Coal Tipples, (4) Abandoned Surface Mines/Refuse Piles (5) Petroleum, and (6) Other Brownfields. Each station will consist of (a) a tri-fold display board describing the risks, possible solutions, and local occurrences with space for visitors to add their knowledge; (b) a facilitator familiar with the problem to answer questions and to engage citizens in conversation and feedback; and (c) a short questionnaire and/or list of questions for the facilitator to guide discussion and comments. There will also be an "unmanned" area where citizens who may not feel comfortable discussing issues at the stations can leave

their comments or questionnaires. Light refreshments in the form of snacks and beverages will be provided and a sign-in sheet will be used to record attendance.

Comments will be collected/compiled by the *Head of Three Rivers* OSM/VISTA. All written/electronic responses will be copied and cataloged in a binder. All in-person presentations will be recorded on audio or video so that a record of responses will be retained. This media will then be edited so that it is viewable by parties that did not attend the meetings.

2. These multiple methods and forms of media will reach a wide variety of citizens in Letcher County so that all relevant stakeholders will have time to review the proposal and provide comments. Different modes of language will be used in different contexts (i.e. when presenting to a community center more visual models and colloquial language will be used while more scientific data and technical language will be presented at a meeting with the Letcher County Water & Sewer District).

The District believes in reaching out to sensitive population to ensure that their voice is accounted for. The sensitive populations of Letcher County are different than many other communities. Letcher County's ESL population is quite small and highly educated (the majority of foreign-born immigrants entering Letcher County do so through the J-1 visa exemption program for foreign born doctors to serve medically underserved areas). However, there is a high rate of illiteracy in the county. To reach out to this population, radio and television will be emphasized with personal appearances on the local issues oriented programs: "Mountain Talk" on WMMT 88.7 FM, "Tuesday Morning Roundtable" on WXXQ 103.9 FM, and "News and Views" on LCPS-TV. This will ensure that interested parties are not turned away by fine print in a newspaper advertisement.

3. The comment period will be for one calendar month to give citizens time to respond without dragging out the process to where initial responders lose interest. PSAs will be continuously run and newspaper articles will be tiered in a way to remind people that may read it the first time yet forget to respond until they read a second reminder.

4. Everyone that submits a comment or raises questions or interest at a meeting will be personally invited in writing to a pre-award, public meeting to be held at the end of the comment period. At this time, all comments will be reviewed and a consensus meeting will follow at which attendees can debate different ideas. Decisions and points made at these meetings will be reflected in a comment summary to be submitted to the EPA Region 4 Office.

G: ONGOING COMMUNITY INVOLVEMENT

1. To emphasize the importance of community involvement in this process, an intern will be hired to organize public forums and community outreach and education. In addition, the Eastern Kentucky Environmental Research Institute will dedicate significant effort by their future *Head of Three Rivers* OSM/VISTA to help in the effort. The

current *Head of Three Rivers* OSM/VISTA in Letcher County has had success in involving the community in the preliminary water sampling that built a previous inventory. The key to successfully working with community members is to meet them halfway and understand their reason for being interested in water quality then connect this interest with the interests of other parties.

Tactics that have been successful and will be utilized by the new OSM/VISTA include:

- Presentations that include data visualization models such as maps and graphs to make scientific data digestible

- Volunteer water monitoring through the Kentucky Watershed Watch program to help citizens understand the creeks that flow besides their houses and places of work or worship.

2. Major stakeholders at the state/local level that will be involved are: Letcher County Fiscal Court (executive and legislative side of county government), Letcher County Health Department, Kentucky Department of Fish and Wildlife, Kentucky Division of Abandoned Mine Lands, local city governments and public water districts that draw their source water from water bodies in or downstream of Letcher County. Meetings will be arranged with representatives of these organizations so that the assessment leads to a successful clean up and redevelopment. By bringing together ideas and funds from various sources it will become possible to clean up more sites in less time and provide continued oversight and management of treatment systems.

3. The intern will have the role of staying in personal communication with residents that live near AMD sites to keep them informed of progress. To keep the larger community informed, a short video will be contracted and produced during the inventory phase to give residents of Letcher County and other interested parties an idea of what type of work is going on. The District will try to involve local media training programs at public schools and the Appalachian Media Institute at the local media arts organization, Appalshop, Inc. to produce this video. Major project turning points will be publicized by PSAs and www.letcherwater.com will remain updated with a blog of project developments. Currently there is not an active Girl Scouts chapter in Letcher County but if one is reactivated or if a surrounding county is interested, the District will work with chapters to educate and to involve scouts to help them earn their Brownfields merit badge.

4. Community-Based Organizations

Headwaters

Evan Smith, 606-205-8753

Headwaters is a newly formed water-oriented non-profit organized by Letcher County citizens. Headwaters provides valuable community knowledge and is working from a board of directors that has strong local trust and will serve as a voice for local and regional water improvement.

Kentucky River Watershed Watch

John Webb, 502-564-3410 x102

Kentucky River Watershed Watch is the Watershed Watch organization that covers the majority of Letcher County and has seen the greatest rise in Letcher County volunteer samplers. There are currently 12 certified volunteers sampling 36 sites in Letcher County (including 9 AMD sites). This project will recruit more samplers and get current samplers involved in picking up more brownfield sites so that volunteers can be involved in generating valuable data.

Letcher County Tourism Commission

Josephine Richardson, 606-632-1200

The Letcher County Board of Tourism is an appointed board of local citizens that has been involved with efforts to promote tourism in Letcher County. Ecotourism has been a major emphasis and by connecting brownfield assessment (and eventually clean up) with tourism it will be possible to emphasize the positive appeal of environmental remediation and cultural heritage.

HOMES, Inc.

Donald Proffitt, 606-632-1717 x302

Housing Oriented Ministries Established for Service, (HOMES) Inc. is a non-profit that serves housing needs for low income populations in Letcher County by constructing single and multi-family housing. HOMES would like to use brownfields as sites to place new residential developments.

H. REDUCTION OF THREAT TO HUMAN HEALTH AND THE ENVIRONMENT

1. The identification and reduction of threats to human health and the environment is the major goal of this project. Acid Mine Drainage is highly deleterious to stream ecosystems and impacts groundwater and streams that are used as a public water source nearly a million Kentuckians. Refuse piles lead to groundwater contamination and can potentially ignite creating noxious coal smoke. Old tipples, switchyards, and machine shops can have lead paint, groundwater contamination, petroleum, underground storage tanks (UST), battery acid contamination, PCBs, and towers and platforms that are human health risks. In addition, massive soil contamination impairs vegetation from taking root. By taking an inventory at each known site, data will be produced that will allow prioritization of sites based on threat identification.

Past Identification of Perceived Health Threats

In February of 2002, a group of researchers from Eastern Kentucky University surveyed health professionals in Letcher County to find out their opinion of the human health risks associated with poor water quality. Seventy-three health professionals responded and the results were published as part of the "Headwaters Report" by the Center for Appalachian Studies at Eastern Kentucky University. Their findings points to the severity of the real or perceived problem: 87.1% believed there was a problem with drinking water in Letcher County, 97% believed there were pollutants in the Kentucky River, 70% believed that purification methods do not remove pollutants from drinking

water, and 76% believed that Letcher County had higher cancer rates than the national average. This survey shows that local health professionals are worried about the quality of water and its link to cancer rates; there is certainly a perceived threat even among local health professionals.

This assessment grant will make it possible to conduct an in-depth inventory of brownfield sites that will help shed light on potential human health effects. Although the Letcher County Conservation District is not seeking funds for public health monitoring, we will work with the Letcher County Health Department and Eastern Kentucky University to pursue a study that will link the brownfields project with a wider project about local health problems. The Phase I/II assessments will identify areas so that it will be possible to reduce exposure to hazardous materials. The District will work with partners to reduce risks immediately while planning for clean up. When contamination is suspected, the District will work with property owners and the proper authorities to post signs warning public or restricting access.

Treatment Options & End Use

One of our partners, The Kentucky Division of Abandoned Mine Lands, has many of the region's foremost experts on cleaning up mine-scarred lands brownfields. A wide variety of Acid Mine Drainage treatment options are available, but in the Eastern United States passive treatment wetlands have proven to be the most effective long-term solution. The general design of these systems involves catching the AMD, moving it through an anoxic limestone channel (to raise pH without oxidizing metals), then slowing down the water in a series of sediment ponds and wetlands to oxidize the metals and catch particulate in a controlled manner to keep it from entering streams and endangering stream ecosystems and public water sources.

Depending on the specific makeup of a refuse pile, a varying combination of removing the refuse and covering the refuse with soil and vegetative cover is used. In some cases there is even enough low-grade coal left in these piles to make it feasible to involve a mining company in removing the refuse. Following this step, the refuse piles are revegetated or redeveloped depending on the future land use. In either case, acid deposition is lowered and the land becomes available for reuse.

Once a system is put in place, regular monitoring is necessary to be sure that discharge is consistent with previous measurements and that the system is working as designed. Dedicated volunteers with Headwaters and Kentucky River Watershed Watch will be responsible for seeing that this regular water monitoring is completed successfully. Institutional controls by the Letcher County Fiscal Court will be put in place so that the toxic sediment is disposed of properly and that contaminated land is not used for agricultural purposes in the future.

2.

The 2001, the Kentucky General Assembly enacted the Voluntary Environmental Remediation Act (VERA) to encourage volunteers to clean up contaminated properties or brownfields through increased liability protection for participants. Within this act, KRS

224.01-510 to 224.01-532, the Voluntary Environmental Remediation Program (VERP) was established. VERP is a formalized voluntary cleanup program by which an applicant can enter into an agreed order with the Kentucky Environmental and Public Protection Cabinet to obtain a covenant not to sue upon completion of an approved corrective action plan. VERP establishes clear procedures and provides timeframes for cabinet review of documents. The program includes a strong public notification and public comment requirement.

The District will make every effort to work with the local Letcher County Health Department as well as environmental oversight authorities including the Kentucky Office of Brownfields, Kentucky Division of Water (DOW), the Office of Surface Mining (OSM), Kentucky Department of Fish and Wildlife, Army Corps of Engineers, and Kentucky Division of Abandoned Mine Lands (AML). This will ensure that no further health risks and ecological damage occur as a part of the brownfields process. The knowledge and experience of state agencies in ensuring public health and safety will be valued utmost and acted upon when pursuing each step.

Academic research regarding the effects of mine-scarred-lands brownfields on public health is lacking. The Letcher County Health Department knows about Letcher County's brownfields but doesn't have the data to link it to human health consequences. Letcher County is known to have cancer incidence rates far above average within the state of Kentucky and even further above the national average. (cancer rates from Kentucky Cancer Registry) It is also known that Acid Mine Drainage sites in Letcher County discharge heavy metals such as Beryllium, Nickel, Cadmium, Copper, and Zinc that are known carcinogens and EPA priority pollutants. (Metals analysis from Kentucky River Watershed Watch). PCB's are regularly found at abandoned mining sites as a result of either negligent practices while mining or illegal dumping once the mine is abandoned.

However due to the way that cancer incidences are aggregated for rare forms of cancer that could be caused by ingesting heavy metals or PCBs, it is impossible to use existing epidemiological data to examine cancer rates in watersheds with brownfield problems. Community members know of areas in the county with cancer rates above one per household and local wisdom links these cancer rates to water impacted by mining, yet no data exists to back this claim. This project will identify areas that raise a serious human health concern and explore the perceived risks.

The serious health risks involved, along with the interest of the local health agency, environmental oversight authorities, and university researchers, puts the District in a great position to identify contaminants and be a part of a significant clean-up and redevelopment effort that will improve the health of the community.

I: LEVERAGING OF ADDITIONAL RESOURCES

The Letcher County Conservation District has an accessible office in Whitesburg that is staffed fulltime. This office has the capability to house the intern and other help

with Internet and telephone service. The Conservation District will pledge the staff time of their experienced, fulltime administrative assistant to manage the bidding and contracting processes. The Conservation District office also houses the National Resources Conservation Service (NRCS) staff person for a five county area. This staff person brings regional insight and decades of experience in carrying out assessment and remediation projects in this area. NRCS will be able to bring consistency and see to it that any additional stages of assessment will be properly carried out. **The District understands that it will have to use its own resources and bring in outside resources to make this a successful project.** During this assessment and afterwards, other sources of funding will become available and be pursued by the District.

Because these project has such a link between clean-up and water quality improvement, a wide variety of environmental improvement funds are available. Office of Surface Mining cooperative agreements of up to \$100,000 per site are available to assist local organization to begin actual construction to treat streams impacted by Acid Mine Drainage. East KY PRIDE, Inc. (funded by National Oceanic and Atmospheric Administration, NOAA) offers Community Grants of up to \$50,000 for environmental improvement projects. The Kentucky Department of Fish and Wildlife has a Stream Restoration & Enhancement Program (funded by the Army Corps of Engineers) that is willing to partner to enhance habitat once Acid Mine Drainage is cleaned up. This program has no funding cap and will spend what is necessary to improve aquatic habitat. EPA 319(h) Non-Point Source Pollution Prevention monies have been successfully used to treat the water quality problems such as these. The Clean Water State Revolving Fund (CWSRF), managed by the Kentucky Infrastructure Authority (KIA), provide an excellent low-interest way to complete projects that reduce nonpoint pollution and help with watershed management.

For redevelopment funds, a number of federal programs will be drawn upon. US Department of Housing and Urban Development (HUD) brownfields economic development initiative (BEDI) funds of up to \$1 million dollars are available for redevelopment that creates economic opportunities of low to middle income populations. Locally determined Community Development Block Grants (CDBG) can be used for a variety of projects and Letcher County's brownfield redevelopment would certainly fall under the rubric of possibilities that would help with promoting community economic development. Economic Development Administration (EDA) Title 1 public works and Title IX economic adjustment funds could be sought. The US Department of Transportation (DOT) and Kentucky Transportation Cabinet could be involved through a variety of ways from including the Transportation, Community, and System Preservation pilot program.

The District will work with Bonafide Prospective Purchasers (BPPs) and the Kentucky Office of Brownfields to seek tax incentives. In Kentucky, the state and local property tax on a remediated property are reduced from 31.5 cents per \$100 of assessed value to 1.5 cents per \$100 of assessed value for three years. In addition up to \$150,000 worth of income tax credits can be earned for expenditures made in order to meet VERP requirements.

Much of this leveraging will be possible following the data and reports created as a part of the Phase II assessments.

J. PROGRAMMATIC CAPABILITY

1. The Letcher County Conservation District was formed in 1952. Since this time it has carried out a wide variety of projects to benefit Letcher County's citizens and environment. The current board consists of seven local landowners all of whom are professionally involved in agriculture or education. This board has 100 combined years of leadership and service.

This project's partners also bring expertise and resources. Headwaters, Inc.'s board is made up of local citizens who are some of the county's foremost experts on local water issues. Eastern Kentucky Environmental Research Institute brings top-notch technical expertise in fields of hydrology and Geographic Information Systems (GIS). Watershed Watch has been running a successful volunteer water-monitoring program since 1997 that boasts 18 active volunteers in Letcher County. The Letcher County Tourism Commission is an effective avenue to connect these inventory and assessment activities to potential economic development interests. HOMES, Inc. has extensive experience in housing development and works with a variety of construction and repair contractors.

2. This Letcher County Conservation District has been very successful at managing federal funds. In 1977, congress passed the Surface Mine Control and Reclamation Act (SMCRA) that created the Rural Abandoned Mine Program (RAMP). During this programs existence from 1977-1989, the District identified, classified, and prioritized abandoned mine sites in Letcher County for cleanup. This involved working with landowners and monitoring the effects of cleanup efforts. Through the USDA's National Resources Conservation Service, the Conservation District has managed the Environmental Quality Initiative Program (EQIP) that aims to increase agricultural productivity and environmental quality as compatible goals. This involves extensive work with local property owners that results in reduction of non-point source pollution in regional streams. Through East KY PRIDE, Inc. the Conservation District has administered a septic grant program that provides free septic tank installation or sewer hook-up for low-income homeowners that had a "straight-pipe" or failing septic system that sent raw sewage directly to the stream.

The Conservation District is regularly audited and has not had any adverse findings.

3. HAS THE LETCHER COUNTY CONSERVATION DISTRICT EVER RECEIVED A BROWNFIELDS OR OTHER EPA OR FEDERAL ASSISTANCE AGREEMENT? "NA"

4. The Outputs and Outcomes will be tracked and measured during the monthly meetings of the Conservation District. Tangible and quantifiable outputs will be declared as part of the work plan and these outputs will be used to reach goal-oriented outcomes. Examples of outputs include: invitations to bid in local newspaper, handbills for local landowners, minutes of community meetings, water quality data. Outputs will be reviewed at regular meetings of the Conservation District and will be approved and available for inspection.